

REMARKS

The Applicant appreciates the Examiner's careful examination of this case. Reconsideration and re-examination are respectfully requested in view of the instant remarks.

In reviewing the specification in the light of the Examiner's objections, it was noticed that the word "film" was missing before "mirror" in the last line of the Abstract. The new Abstract corrects this omission.

In view of the objections raised in the Office Action, claims 1 – 11 are deleted and they are replaced by new claims 12 – 20.

In paragraph 2 of the Office Action, the Examiner rejected claims 1 – 5 as being anticipated by Williams, Jr. et al ('723). The new claim 12 is a combination of original claims 1, 6 and 9. Since claims 6 and 9 were not objected to by the Examiner in paragraph 2 of the Office Action, it is believed that the Examiner will agree that the new claim 12 is allowable over Williams, Jr. et al.

In paragraph 3 of the Office Action, the Examiner rejected claims 1 – 6 and 9 as being anticipated by Albert ('717). The new claim 12 is a combination of original claims 1, 6 and 9 and thus the Examiner would appear to believe that the new claim 12 is anticipated by Albert. We respectfully disagree with this. More specifically, Albert discloses apparatus for constructing a thin film mirror. Albert describes first and second attachment means 13 which are described at column 2 lines 61 – 63 as follows:

"the margins 14, (Fig. 2) of the film 12 are intended to be sealed by the attachment means 13 on the frame walls 11".

The attachment means 13 is shown in more detail in Figure 9. The film is firmly secured along the top and bottom walls. The attachment means does not allow the film to move relative to the top and bottom edges of the suction chamber.

The Examiner appears to believe that Albert further discloses end means 17 for stretching the film 12 in a horizontal direction. The stretch and subsequent distortion introduced into the film 12 by the end means 17 is indicated in Figure 10. Each end margin 15, 16 of the film 12 is first attached to a stretch block 20 by attachment means as shown in Figures 4 and 6. The stretch block 20 is then deformed by the end means via the action of the screw 30. The distortion of one end margin of the film is shown in Figure 10. The initial position of the stretch block and end margin of the film are indicated by the straight line K between points X and Y. The end means when tensioned deforms the stretch block into the shape indicated by the curve A, between points X and Y. The region of the film is stretched as shown in Figure 10 as the region enclosed by the curve H. It is to be noted that the film at point X does not move as the end means stretches the film, neither does the film at point Y. The film is not able to move laterally with respect to the top and bottom edges of the suction chamber and this is confirmed by Figure 10 where the end means stretches the film. Also, the degree of stretch is

not adjustable but must be to such a degree that the stretch block 20 is curved until it meets the curved stop 27, sealing the thin film to the chamber.

Figure 10 also shows that the film is not stretched horizontally but is stretched radially. The film is moved effectively further away from the centre of curvature of the sphere defined by the edges of the suction chamber. The attachment means of the Applicant's invention allows the film to be stretched in a direction which is lateral to the edges of the chamber, that is the film remains the same distance from the centre of curvature of the sphere defined by the edges of the suction chamber.

For the above reasons, it is respectfully submitted that Albert does not disclose the features of the new claim 12.

With regard to paragraph 4 of the Office Action, a replacement Sheet 3/3 of the drawings is filed herewith. The Reference No. 18 has been added to Figure 3 as requested by the Examiner. The Applicant was obliged to the Examiner for noticing this error in the drawings.

With regard to paragraph 5 of the Office Action, the Applicant was also much obliged to the Examiner for kindly indicating that original claims 7, 8, 10 and 11 would be allowed if rewritten in independent form to include all the limitations of the base claim and any intervening claims. The Applicant respectfully believes

that he is entitled to a little broader protection than the protection offered by original claims 7, 8, 10 and 11. More specifically, the Applicant believes that he is entitled to the protection afforded by a combination of original claims 1, 6 and 9.

In the new claims, new claims 13 – 16 correspond to original claims 2 – 5, new claims 17 and 18 correspond to original claims 7 and 8, and new claims 19 and 20 correspond to original claims 10 and 11.

In the Notice of References Cited, the Examiner has listed a number of references in addition to Williams, Jr. et al ('723) and Albert ('717). This other listed prior art has been carefully considered and it is believed not to affect the allowability of the new claims, nor the above submissions.

In accordance with the Applicant's duty to disclose all known prior art, it is hereby disclosed that the Applicant has corresponding European Patent Application No. 03253788, a corresponding UK Patent Application No. 0215049.8, and a corresponding Canadian Patent Application No. 2,433,121. On the Canadian Patent Application No. 2,433,121, a Search Report has not yet been received.

On the European Patent Application No. 03253788, a Search Report was received which cited the above discussed USA Patent No. 4592717 to Albert. In addition, the European Examiner cited DE 37 21 114, US 5,552,006, US 5,997,146 and EP 1,176,447. All of these patents are listed in the Notice of

References Cited except for EP 1,176,447. The patent was only cited by the European Examiner to illustrate technological background. The patent is owned by the present Assignee and the inventor is the inventor of the present application. A copy of EP 1,176,447 together with a copy of the Search Report as published by the European Patent Office is filed herewith for the Examiner's convenience. EP 1,176,447 clearly does not anticipate the Applicant's new claim 11.

On the corresponding UK Patent Application No. 0215049.8 the UK Examiner initially cited EP 1,176,447, JP 2000326084, US 6,113,242, US 6,050,692, US 5,552,006, US 4,734,557, US 4,548,482 and US 4,422,723. In a later Office Action dated December 17, 2004 the UK Examiner also cited US 4,592,717 and DE 3,721,114. All are listed in the Notice of References Cited or were cited by the European Patent Office Examiner and considered above, except for US 6,113,242, US 4,734,557 and JP 2000326084. These three citations have been carefully considered and they are not believed to affect the allowability of the above claims, nor the above submissions.

Accordingly, it is respectfully submitted that this application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this **RESPONSE** is found to be **INCOMPLETE**, or if at any time it appears that a **TELEPHONE CONFERENCE** with Counsel would help advance prosecution, please telephone the undersigned or one of his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,



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Amendments to the Drawings

Please replace sheet 3/6 of the drawings with the enclosed Replacement Sheet 3/6. The attached sheet of drawings includes a change to Fig. 3. In the Replacement Sheet 3/6, the reference No. 18 has been added to the right side of the drawing.

Attachment: Replacement Sheet.